

What Is Claimed Is:

1. A host device which transfers an image signal to a plurality of panels connected thereto, comprising:

5 a panel ID recognition section for recognizing a panel ID for a unit consisting of either a single panel or a predetermined number of panels;

a window ID allocation section for allocating a window ID for a window constituting a unit for transferring said image signal;

10 a control signal output section for outputting a control signal for setting said window ID to be processed to said panel ID in transferring said image signal; and

an image signal transfer section for adding said window ID allocated by said window ID allocation section to  
15 said image signal and transferring said image signal.

2. The host device according to claim 1, wherein said control signal output section outputs setting information of a processing space that is information relating to a  
20 display area to be processed for each unit having said panel ID or for a plurality of selected units having said panel ID.

3. The host device according to claim 2, wherein said  
25 setting information, which is outputted from said control signal output section, is to provide a gap between end coordinates of a processing space and start coordinates of

an adjacent panel.

4. The host device according to claim 1, said host device further comprising a panel attribute setting section for setting a panel attribute for said panel ID, wherein said control signal output section specifies said panel ID and outputs a control signal for indicating a panel attribute set by said panel attribute setting section.

5. The host device according to claim 1, wherein said image signal transfer section manages an update of a screen for each window, packetizes an updated image signal when the update is needed, adds said window ID to said image signal and transfers said image signal.

6. The host device according to claim 1, said host device further comprising:

a panel ID setting instruction section for instructing a setting of a panel ID to said panel, wherein said panel ID recognition section recognizes said panel ID from information outputted from said panel based on an instruction by said panel ID setting instruction section.

7. A host device which transfers an image signal to a high-resolution panel connected thereto, comprising:

a panel ID recognition section for imagining sub-panels obtained by dividing said high-resolution panel

into a predetermined number and for recognizing a panel ID for a unit consisting of the single sub-panel or a predetermined number of the sub-panels ;

a window ID allocation section for allocating a window ID for a window constituting a unit for transferring said image signal;

a control signal output section for outputting a control signal to set said window ID to be processed for said panel ID in transferring said image signal; and

an image signal transfer section for adding said window ID allocated by said window ID allocation section to said image signal and transferring said image signal.

8. The host device according to claim 7, wherein said control signal section outputs setting information of a processing space that is information relating to a display area to be processed for each unit having said panel ID.

9. The host device according to claim 7, wherein said image signal transfer section manages an update of a screen for each window, packetizes an updated image signal when the update is needed, and adds said window ID to said image signal, thus transferring said image signal.

10. The host device according to claim 7, said host device further comprising: a panel ID setting instruction section for instructing a setting of said panel ID for said sub-panel, wherein said panel ID recognition section

recognizes said panel ID from information outputted from said high-resolution panel based on an instruction by said panel ID setting instruction section.

- 5 11. An image display device, which is connected to a host device for transferring an image signal and displays an image by a plurality of panels, comprising:

panel ID setting means for setting a panel ID, which is an identifier, either for a single panel or for a  
10 predetermined number of panels

recognition means for recognizing a correspondence relation of said panel ID and a window ID to be processed, with respect to the window ID allocated for a window that is a transfer processing unit of the image signal; and

15 receiving means for receiving said window ID added to the image signal transferred, wherein a panel processes, based on the correspondence relation recognized by said recognition means, the image signal for which a specified window ID received by the receiving means is allocated, the  
20 panel having a panel ID which corresponds to the specified window ID.

12. The image display device according to claim 11, wherein panel control bits for allowing said host device to  
25 recognize states of the plurality of panels are provided.

13. The image display device according to claim 11, wherein

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said panel includes a plurality of processing units capable of respectively processing a single window.

14. An image display device, which is connected to a host device for transferring an image signal, and displays an image on a panel, comprising:

panel ID setting means for imagining sub-panels obtained by dividing said panel into a predetermined number and setting a panel ID, which is an identifier, either for the single sub-panel or for a predetermined number of the sub-panels;

recognition means for recognizing a correspondence relation of said panel ID and a window ID to be processed, with respect to the window ID allocated for a window that is a transfer processing unit of the image signal; and

receiving means for receiving said window ID added to the image signal transferred, wherein the sub-panel processes, based on the correspondence relation recognized by said recognition means, the image signal for which a specified window ID received by the receiving means is allocated, the sub-panel having a panel ID which corresponds to the specified window ID.

15. The image display device according to claim 14, wherein panel control bits for allowing the host device to recognize states of the sub-panels are provided.

16. The image display device according to claim 14, wherein said sub-panel includes a plurality of processing units capable of respectively processing a single window.

17. The image display device according to claim 14, wherein only one memory for storing setting information of the sub-panel set by said panel ID setting means is provided.

18. An image display system comprising:

a host system for executing an application; and  
a display constituted by a plurality of panels connected to the host system, wherein the plurality of panels in said display have a panel ID as an identifier; and said host system allocates a window ID for a window that is an area making a sense collectively on an image space, of which the host system is conscious, adds the window ID to an image signal, thus outputting the image signal to said display, and outputs a control signal to allow the window ID and said panel ID to correspond to each other.

19. The image display device according to claim 18,

wherein said host system packetizes the image signal before an image development, and outputs the packetized image signal, and the panel in said display executes a processing for developing said image signal before the image development, which is outputted from the host system.

20. An image display method which displays an image on a display based on a signal from a host system for executing an application, comprising the steps of:

setting a panel ID for identifying either a single display section or a predetermined number of display sections forming a tiling, for the plurality of display sections constituting said display;

defining a window as an area which makes a sense collectively on an image space, of which said host system is conscious;

allocating a window ID for the window;

prior to a transfer of image information, setting a window ID to be processed for said display section for which said panel ID is set; and

transferring said image information after adding said window ID to said image information.

21. The image display method according to claim 20, wherein said display is an enlarged panel using a plurality of panels, and said display section constituting the display is the panels constituting the enlarged panel.

22. The image display method according to claim 20, wherein said display is a single high-resolution display panel, and said display section constituting said display is a

sub-panel which is obtained by dividing the high-resolution panel and is processed.

23. The image display method according to claim 20, wherein  
5 a change of said panel ID and a change of said window ID to be processed by said display section are transmitted from said host system to said display by a command.

24. The image display method according to claim 20, wherein  
10 a common panel ID is set to all of the predetermined number of display sections forming the tiling, and a common window ID is set to all of the predetermined number of display sections.

25. A panel attribute reading-out method, in which a panel  
15 ID for identifying a display panel is set for a plurality of display panels connected to a host system for executing an application, and an attribute of the display panel is read out by the host system, comprising the steps of:

20       setting said panel ID to "0" for all of the display panels at the time of turning on a power source;

          reading out attribute information of a specified display panel by said host system;

          setting said panel ID to a value other than "0" using  
25 a command for said display panel from which the attribute information is read out;

          by a display panel having a panel ID of "0",



inhibiting said command from the host system from being sent to a downstream display panel; and

by a display panel having the panel ID other than "0", selecting one of the plurality of display panels

5 connected to the downstream side, thus transferring the attribute information to said host system.

26. The panel attribute reading-out method according to claim 25, wherein said display panel having the panel ID  
10 other than "0" selects a display panel which first outputs "0," and transfers said attribute information to said host system.

27. The panel attribute reading-out method according to  
15 claim 25, wherein when "0" is outputted simultaneously from two or more of the downstream display panels to said display panel having the panel ID other than "0," one downstream display panel is selected in accordance with a priority fixed in said display panel, and said attribute  
20 information is transferred to said host system.

28. The panel attribute reading-out method according to claim 25, wherein when a plurality of display panels are tiled, attribute information is transferred from a display  
25 panel closest to said host system among the display panels tiled, and a command from said host system which sets a panel ID is sent to all of the display panels tiled without

being blocked.

29. The panel attribute reading-out method according to claim 25, wherein said display panel is a sub-panel  
5 obtained by dividing a single high-resolution panel, and said panel ID is set corresponding to said sub-panel, and an attribute corresponding to the sub-panel is read out.

30. An image display control method, which controls a  
10 plurality of display panels connected to a host system for executing an application, comprising the steps of:

setting a panel ID for identifying said display  
panels;

by said host system, specifying a specified panel ID  
15 and issuing to a display panel having the specified panel ID a command to confirm that the display panel is continuously operating; and

responding to a reading-out of said host system by  
using bits indicating that said display panel specified by  
20 said panel ID is active.

31. The image display control method according to claim 30, wherein when newly added display panels exist, bits for notifying that the newly added display panels exist are  
25 made to be active to respond to said host system.